

REMARKS

Claims 1-12, 42-70 are pending in the present application. In the above amendments, claims 1, 3, 4, 9, 49, 50, 55, 60, 63, 66, 67, and 69 have been amended. No claims have been canceled or added in this amendment.

Information Disclosure Statement

In the Office Action mailed June 30, 2005, the Examiner indicated that the information disclosure statement filed on April 08, 2004 failed to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance. Applicants are submitting an information disclosure statement including form 1449 to resubmit the references and a statement of the relevance of each of the references with this amendment.

Drawings

Applicant has amended Fig. 1 and FIG. 3 in accordance with the Examiner's suggestion. Applicant submits that the above amendments to the drawings do not make any substantive changes or introduce any new material but are simply the correction of typographical errors, which are consistent with the specification as originally submitted. Therefore, approval and entry of the above amendments are respectfully requested.

Specification

The amendments to the specification are made by presenting marked up replacement paragraphs which identify changes made relative to the immediate prior version. The changes made are primarily typographical or grammatical in nature.

The Examiner suggested changing the period after the term however to a comma in paragraph [0020] at line 3. Applicants have not incorporated this change and respectfully submit that such a change would form a grammatically incorrect run-on sentence.

Claims

In the Office Action mailed June 30, 2005, the Examiner rejected claims 1, 44, 45, 48 and 65 under 35 U.S.C. § 102(b) as being anticipated by JP 63-75553 (Toshiyuki). Applicant respectfully submits that the rejection is improper and traverses the rejection as follows.

Regarding claim 1, claim 1 recites “a current managing unit for varying the pump current between a first constant current and a second constant current in accordance with the output signal” (emphasis added). Applicant respectfully submits that this element is not shown or discussed in Toshiyuki. There is no current managing unit shown in Toshiyuki. The current through the oxygen pump element (8) is controlled by a differential amplifier (15) that increases or decreases the current through the oxygen pump element (8) based directly on the output of the battery element (9). The current through the oxygen pump element 8 in Toshiyuki does not vary between a first constant current and a second constant current. Applicant respectfully submits that Toshiyuki does not show a “current managing unit for varying the pump current between a first constant current and a second constant current” and that claim 1 is allowable.

Claim 44 recites a current managing unit configured “to adjust an oxygen ion flow between the measuring cell and ambient air by varying, in accordance with the output signal, a pump current flowing through a pump cell of the measuring cell between a first constant current and a second constant current”. Applicant respectfully submits that this element is not shown or discussed in Toshiyuki. As explained above, the current through the oxygen pump element (8) is controlled by a differential amplifier (15) that increases or decreases the current through the oxygen pump element (8) based directly on the output of the battery element (9) and is not varied between a first constant current to a second constant current in Toshiyuki. Accordingly, applicant respectfully submits that claim 44 is allowable over Toshiyuki.

Regarding claims 45 and 48, these claims depend from claim 44 which applicant respectfully submits is allowable. Accordingly, claims 45 and 48 are at least allowable as depending from an allowable base claim.

Claim 65 recites “a current managing unit configured to adjust an oxygen ion flow between the measuring cell and ambient air by varying, in accordance with the output signal, a pump current flowing through a pump cell of the measuring cell between a first constant current and a second constant current”. Applicant respectfully submits that this element is not shown or discussed in Toshiyuki. As explained above, the current through the oxygen pump element (8) is controlled by a differential amplifier (15) that increases or decreases the current through the oxygen pump element (8) based directly on the output of the battery element (9) and is not varied between a first constant current to a second constant current in Toshiyuki. Accordingly,

applicant respectfully submits that all the elements of claim 65 are not shown in Toshiyuki and that claim 65 is allowable.

The Examiner objected to claims 1, 3, 4, 9, 49, 50, 55, 60, 63, 64, 66, 67, and 69 due to informalities. Applicants have amended the claims in accordance with the Examiner's suggestion to overcome the claim objections.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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IN THE DRAWINGS

Please amend FIG. 1 and FIG. 3 by replacing Sheet 1 and Sheet 3 with the attached replacement sheets.